

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
1 July 2004 (01.07.2004)

PCT

(10) International Publication Number  
**WO 2004/055239 A1**

(51) International Patent Classification<sup>7</sup>: **C23F 13/00**

(21) International Application Number:  
PCT/KR2003/000299

(22) International Filing Date: 12 February 2003 (12.02.2003)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:  
2002/0079430 13 December 2002 (13.12.2002) KR  
2002/0079431 13 December 2002 (13.12.2002) KR

(71) Applicant (for all designated States except US): **KOREA POWER ENGINEERING COMPANY, INC.** [KR/KR];  
360-9 Mabuk-ri, Guseong-eup, 449-713 Yongin-city,  
Kyungki-do (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHANG, Hyun-Young** [KR/KR]; Ga-101 Yangji Heights Villa,  
168, Neungpyung-ri, Opo-eup, 464-892 Kwangju-city,  
Kyungki-do (KR). **HWANGBO, Gon** [KR/KR]; 112-1901  
Kkachimaetul 1 Danji, Gumi-dong, Bundang-gu, 463-500

Seongnam-city, Kyungki-do (KR). **JIN, Tae-Eun**  
[KR/KR]; 221-305 Woosung Apt., Areum Maeul,  
Seohyun-dong, Bundang-gu, 463-050 Seongnam-city,  
Kyungki-do (KR). **SHIN, Min-Yu** [KR/KR]; 31-401  
Hankang Mension, Dongbu Ichon-dong, Yongsan-gu,  
140-724 Seoul (KR).

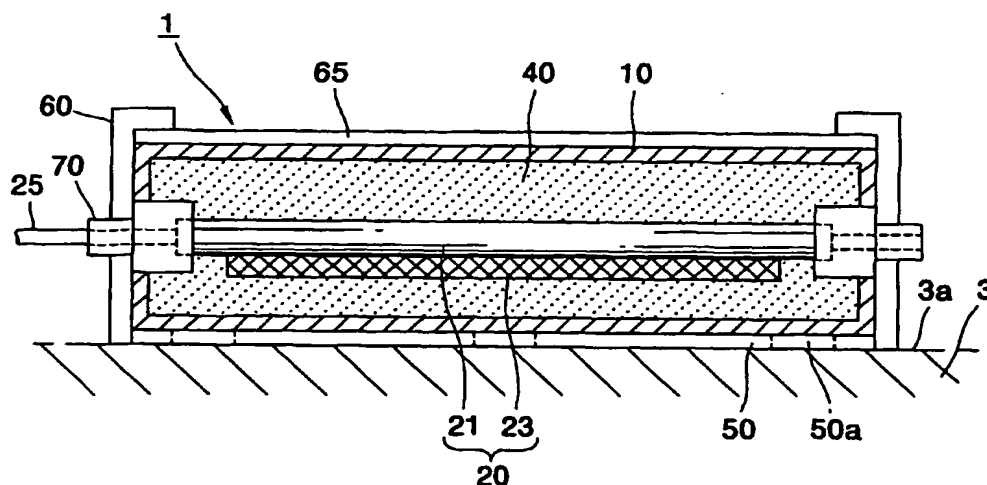
(74) Agent: **LEE, Young-Pil**; The Cheonghwa Building,  
1571-18, Seocho-dong Seocho-gu, 137-874 Seoul (KR).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK,  
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,  
MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG,  
SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,  
VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI,

[Continued on next page]

(54) Title: APPARATUS FOR CATHODIC PROTECTION IN AN ENVIRONMENT IN WHICH THIN FILM CORROSIVE FLUIDS ARE FORMED AND METHOD THEREOF



(57) Abstract: An apparatus and method for cathodic protection in an environment where thin film corrosive fluids are formed is provided. The apparatus which protects from corrosion an object exposed to the thin film corrosive fluids, by artificially adjusting a potential of the object, comprises a DC power supply of which cathode is electrically connected to the object to be corrosion-protected, and an anodic assembly of which anode is electrically connected to the DC power supply. The anodic assembly includes an insulating filter member through which the corrosive fluids pass and which forms an accommodation space inside the insulating filter member, an anodic member accommodated in the insulating filter member, an electrode lead line which electrically connects the DC power supply to the anodic member, and an absorption conductive member which is accommodated in the insulating filter member to surround the circumference of the anodic member and absorbs the corrosive fluids flowing along an exposed surface of the object to be corrosion-protected.



SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*